Patent claims

1. Areally extended composite material (1) with fibers (20, 30) and plastic impregnations (21), which comprises at least two arrays of parallel fiber cords (2, 3) which extend in different directions and which form a web, mesh or grid, with it being possible for the fiber cords to be bundle-like or band-like,
characterized in that the fibers (20) of a first array (2) are impregnated with substantially more plastic (21) than the fibers (30) of a second and possibly of a further array (3) so that the composite material (1) is stiff in the direction of the fibers of the first array and is flexible transversely to this direction; and in that openings advantageously exist between the fiber cords.

2. Composite material in accordance with claim 1, characterized in that it is built up through two arrays of fiber cords (2, 3) which are crossed at binding points (7) and in this form a web or a mesh.

3. Composite material in accordance with claim 1 or claim 2, characterized in that the fiber cords (2) of the first array have an impregnation which — in relation to the maximum capacity of plastic which can be taken up — amounts to at least 35%, whereas the impregnation of the further fiber cords (3, 3'; 3a, 3b) is less than 20%, preferably less than 5%.

4. Composite material in accordance with any one of the claims 1 to 3, characterized in that the plastic for the impregnation is a

thermoplastic, to which a pulverized duroplastic and/or a pulverized inorganic material can be admixed.

5. Composite material in accordance with ~~any one of the~~ claims 1 ~~to 3,~~ characterized in that the fibers (20) of the first array have a substantially smaller diameter than the fibers (30) of the second or further array; and in that in particular the fine fibers (20) of the first array consist of carbon and the coarse fibers (30) of the second or further array consist of glass.

6. Method for the manufacture of a composite material in accordance with ~~any one of the~~ claims 1 ~~to 5,~~ characterized in that in a first step non impregnated fiber cords are woven together to form a textile surface, with the fiber cords (2) to be stiffened being used for forming a warp of the web and the further fiber cords (3) for a weft insertion; and in that in a second step a pressure impregnation is carried out in which the web is drawn through an impregnation bath (4) in the warp direction.

7. Method in accordance with claim 6, characterized in that substantially finer fibers (20) are used for the fiber cords (2) of the warp than for the fiber cords (3) of the weft insertion.

8. Method for the manufacture of a composite material in accordance with ~~any one of the~~ claims 1 ~~to 5,~~ characterized in that in a first step impregnated fiber cords (2) are woven together with non impregnated fiber cords (3) to form a textile surface, with the non impregnated fiber cords being used to form a warp of the

web; and in that in a second step a pressure impregnation is carried out with the web being drawn through an impregnation bath (4) in the warp direction and with an impregnation of less than 20%, preferably less than 5% — in relation to the maximum capacity of plastic which can be taken up — being carried out.

9. Method for the manufacture of a composite material in accordance with ~~any one of the~~ claims 1 to 5, characterized in that stiff impregnated fiber cords (2) which are arranged parallel to one another are welded together with flexible impregnated fiber cords (3a, 3b) to form a grid, with the welding being carried out in accompaniment with a partial melting of the plastic impregnation as well as with a pressing together.

10. Use of a composite material in accordance with ~~any one of the~~ claims 1 ~~to 5,~~ characterized in that components, in particular for the construction of machines or of buildings are reinforced at edges or at cylindrical partial surfaces with this composite material (1), with the composite material being adhesively bonded on or welded on in one or more layers.